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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			ADAMS, GREGORY W	
			ART UNIT	PAPER NUMBER

3652

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/624,987	HOFMEISTER ET AL.	
	Examiner	Art Unit	
	Gregory W. Adams	3652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 and 40-71 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 and 40-71 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/7/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1, 10, 14, 16 & 52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
2. With respect to claim 1, line 19, it is unclear whether "at least one holding module" refers to "a substrate holding module" as claimed in line 6 or "another module capable of holding the substrate" line 10.
3. With respect to claim 10, line 20 and line 26, it is unclear whether "reach" refers to the reach of a transport vehicle base or the reach of a transport vehicle transfer arm.
4. With respect to claim 14, line 3, it is unclear whether "other module" references "one processing module" or "another module".
5. Claim 16 recites the limitation "the first chamber" in line 4. There is insufficient antecedent basis for this limitation in the claim.
6. With respect to claim 52, it is unclear how an "active platen" is movable relative to a base, as disclose in line 5 if it is mounted to a base as disclose in line 2.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 5-10, 13, 15-20, 22-38 & 40-53 rejected under 35 U.S.C. 102(e) as being anticipated by Mizokawa et al. (US 2002/0150448).
9. With respect to claim 1, referring to FIGS. 1-10 Mizokawa et al. disclose a substrate processing apparatus 2 having a transport chamber 14, linear slot 11, holding modules 4 located on one side of slot 11 and connected to transport chamber 14, another module A, B, C, D connected to transport chamber 14, and transport vehicle 13 having base 12,13, and arm 45.
10. With respect to claim 5, referring to FIGS. 1-10 Mizokawa et al. disclose another module A,B,C,D connected to transport chamber 14. Page 2, para. 0031, Ins. 6-7.
11. With respect to claim 6, referring to FIGS. 1-10 Mizokawa et al. disclose a transport chamber 14 connecting holding module 4 with other module A,B,C,D.
12. With respect to claim 7, referring to FIGS. 1-10 Mizokawa et al. disclose a rotatable arm 45 for transport vehicle 13.
13. With respect to claim 8, referring to FIGS. 1-10 Mizokawa et al. disclose a linear motor 12,41,43 for driving transport vehicle 13.
14. With respect to claim 9, referring to FIGS. 1-10 Mizokawa et al. disclose an electric motor 12,41,43 connected to a directionally articulating arm 45.
15. With respect to claim 10, referring to FIGS. 1-10 Mizokawa et al. disclose a substrate processing apparatus 2 comprising a transport chamber 14 with openings

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16A, 16B, 16C, 16D, processing module A, B, C, D, module 4 for holding substrate, transport vehicle 13, base 12,13, arm 45 for transferring substrate from transfer chamber 14 and processing module A,B,C,D. Page 3, para. 0035, Ins. 6-8.

16. With respect to claim 13, referring to FIGS. 1-10 Mizokawa et al. disclose a tubular transport chamber 14. It is noted that "tubular", of or relating to a tube, defines a tunnel. The American Heritage® Dictionary of the English Language, Fourth Edition, Copyright © 2000 by Houghton Mifflin Company.

17. With respect to claim 15, referring to FIG. 4 Mizokawa et al. disclose a tubular transport chamber 14 where module 4 is connected to transport chamber 14 side.

18. With respect to claim 16, referring to FIG. 4 Mizokawa et al. disclose base 12,13 interacting with transport chamber 14 wall to movably support the transport vehicle 13.

19. With respect to claim 17, referring to FIGS. 5,7 Mizokawa et al. disclose a linear motor 12,41,43 connected to transport chamber 14 that drives transport vehicle 13 and for movement of arm 45.

20. With respect to claim 18, referring to FIGS. 1-10 Mizokawa et al. disclose a solid state motor 12,41,43. Page 3, para. 0036, Ins. 17-18.

21. With respect to claim 19, referring to FIGS. 1-10 Mizokawa et al. disclose a linear motor 12, 41, 43 that extends along a portion of the transport chamber 14 and a least a portion of other module 4.

22. With respect to claim 20, referring to FIGS. 1-10 Mizokawa et al. disclose a semiconductor workpiece processing apparatus 2 comprising a first chamber 14, transport vehicle 13, base 12,13, arm 45, another chamber A, B, C, D connected to first

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chamber 14 through openings 16A,16B,16C,16D creating a first chamber environment, page 2, para. 0032, Ins. 8-9.

23. With respect to claim 21, referring to FIGS. 1-10 Mizokawa et al. disclose an opening 16A, 16B, 16C in transport chamber 14. It is noted that Mizokawa et al. do not prescribe an opening less door where an environment separate from processing chamber A, B, C, D necessitates sealing said environment.

24. With respect to claim 22, referring to FIGS. 1-10 Mizokawa et al. disclose an apparatus wherein transport chamber 14 has an isolated environment separate from that of other chamber A, B, C, D. Page 2, para. 0032, Ins. 8-9.

25. With respect to claim 23, referring to FIGS. 1-10 Mizokawa et al. disclose a tubular first chamber 14 and a linear travel path 11. It is noted that "tubular", of or relating to a tube, defines a tunnel. The American Heritage® Dictionary of the English Language, Fourth Edition, Copyright © 2000 by Houghton Mifflin Company. Other chamber A, B, C, D is/are connected to lateral sides of first chamber 14.

26. With respect to claim 24, referring to FIGS. 1-10 Mizokawa et al. disclose for transport vehicle 13 a path defined by first chamber 14 and other chamber A,B,C,D.

27. With respect to claim 25, referring to FIGS. 1-10 Mizokawa et al. disclose a first chamber 14 environment, page 2, para. 0032, Ins. 8-9, different than other chambers A, B, C, D.

28. With respect to claim 26, referring to FIGS. 1-10 Mizokawa et al. disclose a tube shaped first chamber 14 with sides and a other chamber A, B, C, D, connected to first chamber 14 lateral sides.

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29. With respect to claim 27, referring to FIGS. 5,7 Mizokawa et al. disclose a base 12, 13 interacting with at least one wall of first chamber 14 to support transport vehicle 13 from first chamber 14.

30. With respect to claim 28, referring to FIGS. 1-10 Mizokawa et al. disclose a linear motor 12,41,43 connected to first chamber 14 and for multi-axis movement of arm 45.

31. With respect to claim 29, referring to FIGS. 5,7 Mizokawa et al. disclose a linear motor 12, 41, 43 extending in first chamber 14 and other chamber A, B, C, D.

32. With respect to claim 30, referring to FIGS. 5,7 Mizokawa et al. disclose a linear motor 12, 41, 43 with a forcer component 41 and a reactive component 42.

33. With respect to claim 31, referring to FIGS. 1-10 Mizokawa et al. disclose a reactive component 42 on transport vehicle 13 and a force component 41 for supporting transport vehicle 13 in first chamber 14.

34. With respect to claim 32, referring to FIGS. 1-10 Mizokawa et al. disclose an arm 45 and end effector 45a for moving substrate. Page 3, para. 0035, Ins. 6-8.

35. With respect to claim 33, referring to FIGS. 1-10 Mizokawa et al. disclose a circular moving arm 45.

36. With respect to claim 34, referring to FIGS. 1-10 Mizokawa et al. disclose another processing module A, B, C, D, attached to first chamber 14.

37. With respect to claim 35, referring to FIGS. 1-10 Mizokawa et al. disclose an other chamber A, B, C, D processing chamber. Page 2, para. 0031, Ins. 6-7. Moreover, while Mizokawa et al. does not prescribe so lithography, metal deposition, etching, and/or heating/cooling modules are common to the art of substrate processing.

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38. With respect to claim 36, referring to FIGS. 1-10 Mizokawa et al. disclose a stocker 4.

39. With respect to claim 37, referring to FIGS. 1-10 Mizokawa et al. disclose a load lock 4.

40. With respect to claim 38, referring to FIGS. 1-10 Mizokawa et al. disclose an interface 16A, 16B, 16C, 16D between the front end module A,B,C,D, first chamber 14.

41. With respect to claim 40, referring to FIG. 9 Mizokawa et al. disclose a substrate processing apparatus 2 comprising a transport chamber 14 with several paths 11AM, 11NZ, holding module 4, first transport vehicle 12A with arm 45 and second transport vehicle 12B with arm 45.

42. With respect to claim 41, referring to FIG. 9 Mizokawa et al. disclose alignment of the travel paths 11AM, 11NZ.

43. With respect to claim 42, referring to FIG. 9 Mizokawa et al. disclose travel paths 11AM, 11NZ that extend lengthwise.

44. With respect to claim 43, referring to FIG. 9 Mizokawa et al. disclose a substrate processing apparatus 2 comprising a transport chamber 14, 15, 18 capable of a controlled atmosphere (para. [0032]) and connected to a substrate holding module 14, transport vehicle 22A-B movably mounted in a transport chamber 14, 15, 18, a transport chamber 14, 15, 18 defines a tube having linear travel paths 11AM, 11NZ orientated at an angle relative to another linear travel paths. It is noted that Mizokawa et al. discloses a linear path for a transport vehicle arm movement. Further, as noted below in

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Arguments section, Mizokawa discloses a transport chamber atmosphere of clean air by the application of chamber walls and a fan and filter.

45. With respect to claim 44, referring to FIG. 9 Mizokawa et al. disclose one linear travel path 11AM, 11NZ intersects another linear travel path.

46. With respect to claims 45-46, referring to FIG. 9 Mizokawa et al. disclose horizontal linear travel path 11AM and vertical linear travel path 11NZ. It is noted that Mizokawa discloses a vertical path for a linear transport vehicle through vertical movement of a transport vehicle transfer arm.

47. With respect to claim 47, referring to FIG. 9 Mizokawa et al. disclose a first transport vehicle 12A and transport vehicle transfer arm 45.

48. With respect to claim 48, referring to FIG. 9 Mizokawa et al. disclose a substrate holding module 14 connected to a transport chamber 14, 15, 18 via a transport chamber side wall closable opening.

49. With respect to claim 49, referring to FIG. 9 Mizokawa et al. disclose transport chamber walls 14 to isolate a drive system.

50. With respect to claim 50, referring to FIG. 9 Mizokawa et al. disclose a transport chamber 14, 15, 18 has different controlled atmospheres in different parts of a transport chamber 14, 15, 18 and a transport vehicle 12A traverses through different parts. As noted above, Mizokawa et al. disclose a linear travel path for a transport vehicle via movement of a transport vehicle transfer arm. To that extent, it is noted that a transport vehicle enters an opening via a transport vehicle arm.

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51. With respect to claim 51, referring to FIG. 9 Mizokawa et al. disclose transport vehicle 22A-B having a transport vehicle platens 42 mounted to a transport vehicle base 12 and cooperating with a transport chamber linear drive 11 wherein transport vehicle platens 42 comprise permanent magnets OR magnetic material.

52. With respect to claim 52, referring to FIG. 9 Mizokawa et al. disclose one active platen 11 and one passive platen 12 fixed to a transport vehicle base 12.

53. With respect to claim 53, referring to FIG. 9 Mizokawa et al. disclose a linear drive system 41 or 42 and windings included within a transport chamber wall.

54. Claim 54-69 are rejected under 35 U.S.C. 102(b) as being anticipated by Hayashi et al. (US 20020044860).

55. With respect to claim 54, Hayashi et al. disclose a substrate processing apparatus comprising a transport chamber 6 capable of a controlled atmosphere (para. [0044]) and connected to a substrate holding module 4, 11-18, 43, 44, 60, 60', first transport vehicle 21 mounted in a transport chamber 6, second transport vehicle 22 mounted in a transport chamber 6, wherein a transport chamber 6 has several linear travel paths 3a-b, 31a-b, 32, 34a-e, 35a-d between opposing walls, a first transport vehicle 21 traveling on a linear travel path 3a-b, 31a-b, 32, 34a-e, 35a-d moving past a second transport vehicle 22 traveling on a linear travel path 3a-b, 31a-b, 32, 34a-e, 35a-d. It is noted that atmosphere comprises clean air.

56. With respect to claim 55, Hayashi et al. disclose a transport chamber 6 has a linking travel path 32 which joins one travel path 3a to an other travel path 3b and

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allowing a first transport vehicle 21 to move from one travel path 3a to another travel path 3b.

57. With respect to claim 56, Hayashi et al. disclose a linking travel path 32 defines a travel direction yes oriented at an angle to another travel direction defined by one travel path 3a.

58. With respect to claim 57, Hayashi et al. disclose a first transport vehicle 21 moves from one travel 3a to an other travel path 3b on a linking travel path 32.

59. With respect to claim 58, Hayashi et al. disclose a first vehicle transfer arm 26.

60. With respect to claim 59, Hayashi et al. disclose one travel path 3a and an other travel path 3b are in parallel planes.

61. With respect to claim 60, Hayashi et al. disclose one travel path 3a and an other travel path 3b are in orthogonal planes.

62. With respect to claim 61, Hayashi et al. disclose travel paths 3a-b, 31a-b, 32, 34a-e, 35a-d extend longitudinally in a transport chamber 6.

63. With respect to claim 62, Hayashi et al. disclose a substrate processing apparatus comprising a transport chamber 6 capable of holding a transport chamber isolated atmosphere (para. [0044]) substrate holding module 4, 11-18, 43, 44, 60, 60' connected to a transport chamber 6 at a substrate transfer opening (para. [0049]), transport vehicle 21, 22, a transport chamber 6 defining a transport chamber linear transport path 3a-b, 31a-b, 32, 34a-e, 35a-d, a transport chamber 6 comprising connectable chamber modules 4, 11-18, 43, 44, 60, 60' which admits a transport vehicle 21, 22. It is noted that atmosphere comprises "climate".

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64. With respect to claim 63, Hayashi et al. disclose a chamber module 4, 11-18, 43, 44, 60, 60' has a closable opening (para. [0049]).

65. With respect to claim 64, Hayashi et al. disclose a chamber module closable opening (para. [0049]) is sized to allow a transport vehicle passage. It is noted that while a transport vehicle base does not enter an opening, a transport vehicle enters an opening via a transport vehicle arm.

66. With respect to claim 65, Hayashi et al. disclose a linear transport path 3a-b, 31a-b, 32, 34a-e, 35a-d extends through each chamber module 4, 11-18, 43, 44, 60, 60'.

67. With respect to claim 66, Hayashi et al. disclose a transport vehicle 21, 22 having a transport vehicle transfer arm 26.

68. With respect to claim 67, Hayashi et al. disclose a substrate transfer opening (para. [0049]) is closable to isolate a transport chamber atmosphere from a substrate holding module 4, 11-18, 43, 44, 60, 60'.

69. With respect to claim 68, Hayashi et al. disclose a transport chamber configuration varies based on predetermined apparatus characteristic.

70. With respect to claim 69, Hayashi et al. disclose a substrate processing apparatus further comprising a linear motor (para. [0045], Ins. 17-19) connected to a transport chamber 6 for driving a transport vehicle 21, 22.

Claim Rejections - 35 USC § 103

71. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim Rejections - 35 USC § 103

72. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizokawa et al. (US 2002/0150448) in view of Harada et al. (US 5,700,127). Mizokawa et al. do not disclose load lock chambers. Harada et al. disclose either a substrate processing chamber 481 and load lock chamber module 483, or a load lock chamber module 484 and load lock chamber module 485, or a substrate processing chamber 481 and another substrate processing chamber 482. Harada et al. teach multiple load locks and substrate processing chambers to provide an exchanging stage 483-485 between substrate processing/holding module 481 and substrate processing/holding module 482. Col. 15, Ins. 28-50. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Mizokawa et al. to include load lock chambers and substrate processing chambers, as per the teachings of Harada et al., to provide an exchanging stage between substrate processing/holding module 481 and substrate processing/holding module.

73. Claims 11-12, 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizokawa et al. (US 2002/0150448) in view of Tepman (US 2002/0061248). Referring to FIGS. 1-10 Mizokawa et al. disclose an opening 16A, 16B, 16C in transport chamber 14. Mizokawa et al. discloses closable openings but does not disclose doors. Tepman discloses closing an opening 238 with a door 292 to provide vacuum sealing of the load lock chamber 230. Para. [0027]. Therefore, it would have

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been obvious to one having ordinary skill in the art at the time the invention was made to modify the closable opening of Mizokawa to include a door, as per the teachings of Tepman, to provide vacuum sealing of a load lock chamber 230.

74. With respect to claim 12, referring to FIGS. 1-10 Mizokawa et al. disclose an apparatus wherein transport chamber 14 has an isolated environment. Page 2, para. 0032, Ins. 8-9.

75. With respect to claim 14, referring to FIGS. 1-10 Mizokawa et al. disclose a transport chamber 14 with environment. Page 2, para. 0032, Ins. 8-9.

76. Claims 70-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. (US 20020044860) in view of Mori et al. (US 5,641,054). Hayashi et al. do not disclose a linear motor comprising a forcer component and in a chamber wall and a reactive component. Mori et al. disclose a linear motor 2-8 comprising a forcer component 4 (or 6) isolated from a transport chamber interior 4 (or 6) vi a chamber module wall and a reaction component 3. Mori et al. teaches a magnetic drive system to provide a non-moving part particulate free and clean transport chamber 1. Col. 1, Ins. 13-35. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the linear drive of Hayashi et al. to include a forcer component and reactive component, as per the teachings of Mori et al., provide a non-moving part particulate free and clean transport chamber.

Response to Arguments

77. Applicant's arguments filed February 25, 2005 have been fully considered but they are not persuasive.

78. With respect to claims 1 and 10, applicant argues that Mizokawa et al. do not disclose an isolated atmosphere, isolated from an atmosphere exterior to a transport chamber. Atmosphere comprises climate or pressure or gases or pressure or any combination thereof. www.dictionary.com. With reference to applicant's specification, claim 1 does not inform atmosphere. Whether there are vents/openings disclosed, Mizokawa et al. discloses a clean air atmosphere which is necessary in the processing of substrates, and does not disclose forcing out atmosphere. Mizokawa discloses holding a clean air atmosphere because Mizokawa discloses a transport chamber having walls and a fan/filter to input clean air atmosphere. Further, with reference to para [0009] Mizokawa discloses a minimum chamber width or minimum transfer opening to reduce overall equipment size in the interests of production needs and equipment and production costs.

79. Applicant's arguments with respect to claim 2 have been considered but are moot in view of the new ground(s) of rejection. (See above).

80. With respect to claim 9, applicant argues that Mizokawa does not disclose a linear motor attached to and for moving of a transport vehicle transfer arm. With reference to Mizokawa para [0033-0034], Mizokawa discloses a linear transfer motor providing power to a transport vehicle 41, transport vehicle base, and transport vehicle transfer arm. In its broadest sense, the application of power to a transport vehicle is an application of power to those elements comprising a transport vehicle, i.e. a transfer arm and base. A linear transfer motor providing power to a transport vehicle drives a transfer arm.

81. Applicant's arguments with respect to the "door" limitation of claims 11 and 21 have been considered but are moot in view of the new ground(s) of rejection. (See above).

82. With respect to claim 12, applicant argues that Mizokawa does not disclose a transport chamber isolated from an environment in at least one processing module. In its broadest sense and as noted above in claim 12 rejections, Mizokawa discloses an isolated transport chamber having walls, filters and fans. Mizokawa does not disclose similar features attached to processing modules nor the communication of transport chamber atmosphere into processing chambers.

83. With respect to claim 14, applicant argues that Mizokawa does not disclose closing an opening. Mizokawa discloses transfer of a transport vehicle transfer arm into a closable opening wherein the position of a transfer arm physically and closes off, albeit substantially, a closable opening from passage by transport chamber atmosphere much less a second transport vehicle transfer arm into an other module. Moreover, as noted above in Claims 1 and 10, Mizokawa disclose a clean air atmosphere presence in transport chamber.

84. With respect to claim 17, applicant argues that Mizokawa does not disclose multi-axis movement. As noted above in claim 9 arguments, Mizokawa discloses a linear motor to drive a transport vehicle, base and transfer arm. Also, as noted above a Mizokawa disclose two axis, the axis comprising the transport vehicle travel, horizontal and vertical, and a travel path of the transport vehicle transfer arm. Further, Mizokawa

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discloses a radial axis of an end effector as well as an additional radial axis of an end effector relative to a transport vehicle base. Mizokawa discloses four axis of movement.

85. With respect to claim 20, applicant argues that Mizokawa does not disclose an isolated atmosphere via a closable opening, a closable opening configured to enable a transport vehicle to transit. As noted above in 35 USC 102 claim 20 rejections

Mizokawa provides an opening through which a transport vehicle may pass through via a transfer arm otherwise processing chambers and transport chambers would be useless because the transport vehicle could not deliver substrate for processing. In addition, "enabl[ing]"e a transport vehicle to pass does not lead necessarily to a transport vehicle moving through said opening.

86. With respect to claim 40, applicant argues Mizokawa does not disclose linear travel paths between opposing walls. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., applicant's mobile units extend across a chamber) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Excepting this, in its broadest sense, "between" means linear travel paths which are physically present and occur within a transport chamber. Further, Mizokawa disclose linear travel paths which stretch from chamber wall to chamber wall, and discloses linear travel paths 12AM-NZ with are within a transport chamber which is bounded by transport chamber walls. Thus, the travel paths are between a transport chamber walls. In

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addition, as noted above a transport vehicle has a linear travel path as defined by an axis of movement followed by a transport vehicle transfer arm. Mizokawa discloses a transport chamber adjacent to substrate holding modules and other modules. A transport vehicle moves substrate into said modules along a linear travel path.

Mizokawa disclose linear travel paths between transport chamber walls. It is unclear from applicant's claims whether the travel paths from a particular chamber wall or whether the travel paths are intended to merely occur within a transport chamber.

Conclusion

87. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5,309,049 to Kawada et al.

US 4,766,993 to Kita et al.

US 2002/0144881 to Miyauchi et al.

US 6,235,634 to White et al.

US 6,238,161 to Kirkpatrick et al.

US 5,086,729 to Katagiri

US 6,206,176 to Blonign et al.

US 6,517,303 to White et al.

88. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory W. Adams whose telephone number is (703) 305-0555. The examiner can normally be reached on M-Th, 8:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on (703) 308-3248. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gwa

 3/31/05
DEAN J. KRAMER
PRIMARY EXAMINER